Claims:

1. Apparatus for controlling the volume of surgical fluid present in a cavity in the body of a patient during surgery, comprising:

a conduit to said cavity for conducting said surgical fluid therefrom;

at least one receptacle for receiving said fluid from said surgical site, said conduit communicating with said receptacle;

a source of vacuum; and

a vacuum controller interposed between said vacuum source and said receptacle, said vacuum controller controlling the duration of time said receptacle is exposed to vacuum from said vacuum source.

2. The apparatus of Claim 1, further comprising a vacuum sensor for sensing a vacuum level approximating that in said at least one receptacle and wherein said vacuum controller controls the duration of time said at least one receptacle is exposed to vacuum based upon data from said vacuum sensor, said vacuum controller comparing said data to a preselected vacuum setpoint and adjusting the time of exposure up or down as required to achieve said setpoint.

3. The apparatus of Claim 2, wherein said vacuum controller includes a valve and valve actuator for positioning said valve, said valve having at least two positions, a first of which places said vacuum source and said at least one receptacle in communication and a second of which isolates said vacuum source from said at least one receptacle.

4. The apparatus of Claim 3, wherein said vacuum sensor is in communication with said at least one receptacle and isolated from said vacuum source when said valve is in said second position.

5. The apparatus of Claim 4, wherein said vacuum controller has a timer for measuring the time that said valve is maintained in said first position and said second position, said timer permitting said vacuum controller to maintain said valve in said second position for a duration of time sufficient for said vacuum sensor to sense a vacuum level approximate to said vacuum level in said at least one receptacle when isolated from said vacuum source.

6. The apparatus of Claim 5, wherein said vacuum controller includes a microprocessor and an algorithm for controlling said valve actuator.

7. The apparatus of Claim 6, wherein said vacuum sensor is in communication with a vent valve, said vent valve venting off vacuum when in an open position.

8. The apparatus of Claim 7, wherein said vent valve has a vent actuator in communication with said vacuum controller permitting said vacuum controller to move said vent valve between said open position and a closed position.

9. The apparatus of Claim 3, wherein said vacuum source is utilized to apply suction to at least one other conduit, said at least one other conduit being in communication with said valve, such that said valve controls application of vacuum from said vacuum source to said at least one other conduit.

10. The apparatus of Claim 9, wherein said valve has a plurality of ports and an internal passageway therein which is selectively positionable by said valve actuator to connect and disconnect a selected one of said plurality of ports to another one of said plurality of ports.

11. The apparatus of Claim 10, wherein said valve has a first port connected to said vacuum source and a second port connected to said at least one receptacle, said first port and said second port being selectively connectable to each other by said internal passageway.

12. The apparatus of Claim 11, wherein said valve has a third port connected to said vacuum sensor, such that when said valve is in said first position said first port and second port are in communication with each other and when said valve is in said second position, said third port and said second port are in communication with each other.

13. The apparatus of Claim 12, wherein said valve has a fourth port connected to said at least one other conduit and has at least a pair of internal passageways, said fourth port being connected to said first port via one of said passageways when said valve is in said second position, and said third port being connected to said second port via the other of said passageways when said valve is in said second position.

14. The apparatus of Claim 13, wherein said valve is a spool valve.

15. The apparatus of Claim 13, wherein said at least one other conduit connected to said fourth port leads to a surgical drape.

16. The apparatus of Claim 15, wherein said vacuum from said vacuum source is shared between said receptacle and said drape by sequential timed distribution thereof by said valve alternately switching between said first position and said second position under the control of said vacuum controller.

17. The apparatus of Claim 16, wherein said sharing of vacuum is prioritized by said algorithm to favor the acquisition of a setpoint vacuum level in said receptacle over the application of vacuum to said drape.

18. The apparatus of Claim 9, wherein said at least one other conduit is connected to a surgical drape.

19. The apparatus of Claim 1, wherein said at least one receptacle includes a plurality of receptacles connected together by means for conveying fluid thereto.

20. The apparatus of Claim 1, further comprising a flow-back filter positioned between said vacuum controller and said at least one receptacle.

21. The apparatus of Claim 1, further comprising a pump for supplying surgical fluid to said cavity.

22. The apparatus of Claim 21, wherein said pump is adjustable to provide a selected output based upon a pressure approximating that present in said cavity.

23. The apparatus of Claim 22, further including a dampener disposed between said pump and said cavity, said dampener receiving the fluid output of said pump and having a pressure-sensitive volumetric capacity such that variations in output volume of said pump are diminished by said dampener, the output of which is directed to said cavity.

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24. The apparatus of Claim 23, further including a fluid sensor for sensing the presence of said surgical fluid that is directed to said cavity by said pump.

25. The apparatus of Claim 24, wherein said fluid sensor includes a light emitting element and a light detector, said light detector juxtaposed proximate said light emitting element to receive light passing through a light transmissive portion of a supply conduit through which said surgical fluid flows before entering said cavity, with light received by said light detector varying depending upon the presence or absence of fluid in said light transmissive portion, such variation in light received being converted by said light detector into an electrical signal that is interpreted to determine the presence or absence of fluid in said light transmissive portion.

26. A method for controlling the volume of surgical fluid present in a cavity in the body of a patient during surgery provided to the cavity by a pump and withdrawn from the cavity into a waste receptacle by vacuum, comprising the steps of:

measuring the level of vacuum present in the waste receptacle;

comparing the level of vacuum present in the waste receptacle to a set point; and

controlling the vacuum exerted upon the surgical fluid by varying the duration of time the waste receptacle is exposed to a source of vacuum, said controlling step including increasing the time period of exposure to vacuum if the measured level of vacuum is less than the setpoint and decreasing the time period of exposure if the measured level of vacuum is greater than the setpoint.